

**FINAL STATEMENT OF REASONS  
FOR  
PROPOSED BUILDING STANDARDS  
OF THE  
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT  
REGARDING THE  
ADOPTION OF AMENDMENTS TO THE 2007 CALIFORNIA BUILDING STANDARDS CODE,  
TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR), PARTS 2, 3, 4, 5 AND 6 INTO  
TITLE 24, CCR, PART 11, CALIFORNIA GREEN BUILDING STANDARDS CODE**

The Administrative Procedure Act requires that every agency shall maintain a file of each rulemaking that shall be deemed to be the record for that rulemaking proceeding. The rulemaking file shall include a final statement of reasons. The Final Statement of Reasons shall be available to the public upon request when rulemaking action is being undertaken. The following are the reasons for proposing this particular rulemaking action:

**UPDATES TO THE INITIAL STATEMENT OF REASONS**

(Government Code Section 11346.9(a)(1) requires an update of the information contained in the initial statement of reasons. If update identifies any data or any technical, theoretical or empirical study, report, or similar document on which the state agency is relying that was not identified in the initial statement of reasons, the state agency shall comply with Government Code Section 11347.1)

No data or any technical, theoretical or empirical study, report, or similar document on which the state agency is relying has been added to the rulemaking file that was not identified in the Initial Statement of Reasons.

The Department of Housing and Community Development (HCD) has made non-substantive, grammatical, or editorial language revisions to the sections listed below. In addition, sufficiently related changes and/or editorial corrections have been made to the following sections: Sections 102.3, 503.2, 504.6, 603.2.1, Tables 603.1 and 603.2, Sections 802, 804.3, 804.4, 804.3.2, 804.4, Table 804.4.4, Worksheets WS-1 and WS-2 and Application Checklist AC-HCD.

**MANDATE ON LOCAL AGENCIES OR SCHOOL DISTRICTS**

(Pursuant to Government Code Section 11346.9(a)(2), if the determination as to whether the proposed action would impose a mandate, the agency shall state whether the mandate is reimbursable pursuant to Part 7 of Division 4. If the agency finds that the mandate is not reimbursable, it shall state the reasons for the finding(s))

The Department of Housing and Community Development has determined that the proposed regulatory action would not impose a mandate on local agencies or school districts.

**OBJECTIONS OR RECOMMENDATIONS MADE REGARDING THE PROPOSED REGULATION(S)**

(Government Code Section 11346.9(a)(3))

The following is HCD's summary of and response to comments specifically directed at the agency's proposed action or to the procedures followed by the agency in proposing or adopting the actions or reasons for making no change:

**COMMENTS 1 – 43 WERE RECEIVED DURING THE 45-DAY COMMENT PERIOD AND SUBSEQUENT 15-DAY POST-HEARING MODIFICATIONS COMMENT PERIOD.**

(The text with proposed changes clearly indicated was made available to the public from March 28, 2008 until May 12, 2008, and from May 31, 2008 until June 16, 2008 for the post-hearing modifications.)

**1. COMMENTER:** William Schock  
California Building Officials (CALBO)  
835 East 14<sup>th</sup> Street  
San Leandro, CA 94577

**COMMENT: EM-10, no section numbers provided:** This comment contains general comments stating that: 1) hyperlinks to private websites should not be included in the body of the code, 2) when state agencies adopt the same sections, the language should be correlated to avoid duplication, confusion and inconsistency, and 3) language used should be enforceable language.

**RESPONSE:** HCD acknowledges the comments received pertaining to the proposed California Green Building Standards Code (CGBC). HCD believes that the comments have merit and has worked with the other state agencies proposing adoption of the CGBC to coordinate language, provide more generic informational references instead of specific web pages and ensure that proposed text is written in an enforceable tone. In addition, HCD will take the concerns expressed in this comment under consideration in the development of future rulemaking packages.

---

**2. COMMENTER:** Scott Harriman, Senior Planner for  
Robert Woods, Chief Building Inspector  
City of Walnut Creek  
1666 N. Main Street, Walnut Creek, CA 94596

**COMMENT: EM- 4, EM-5 and EM-6, no section numbers provided:** The comment suggests that the proposed regulations overlap with the energy code, clean water provisions, are unnecessarily ambiguous and vague, and already exist in other documents such as Green Point Rated and LEED. The comment also includes suggestions regarding enforcement, stating: 1) enforcement should not be difficult compared to energy standards that are already enforced, 2) an affidavit from the designer or consultant could be used to certify compliance, 3) third party inspectors could be utilized although the commenter does not favor this idea, and 4) non-mandatory compliance options need to be clarified and should not be optional unless part of a trade-off or point based system.

**RESPONSE:** HCD acknowledges the comments received regarding its proposed green building standards. However, the majority of the comment lacks specificity in identifying the adoption, amendment, or repeal of regulations that are being proposed and does not make a specific suggestion to specific text. No code changes have been proposed to HCD's rulemaking package as a result of this comment. HCD does believe that within its proposed language, an affidavit may be used as verification of compliance as long as it is acceptable to the enforcing agency. Also, HCD's proposed regulations do have a mandatory effective date concurrent with the 2010 California Building Code. HCD will take the concerns expressed in this comment regarding third party certification under consideration in the development of future rulemaking packages.

---

**3. COMMENTER:** Paul Poirer, AIA, LEED AP, ET AL  
Poirer + David Architects  
156 W. Alamar Ave., Ste. C  
Santa Barbara, CA 93015  
  
Dan Geiger, Executive Director  
Andrea Traber, President of the Board  
U.S. Green Building Council  
Northern California Chapter  
130 Sutter Street, #600  
San Francisco, CA 94104

**COMMENT: EM- 13 and EM-14, Section 101.2:** The commenter requested that language used in Section 101.2 be changed to "Indoor Air Quality".

**RESPONSE:** The text used in Section 101.2 is synonymous with the title of Chapter 8. HCD believes that a change is not appropriate because the intent of this chapter is to address air quality on a broad basis, not

---

just indoors. No code changes have been proposed to HCD's rulemaking package as a result of this comment.

---

- 4. COMMENTER:** Paul Poirer, AIA, LEED AP, ET AL  
Poirer + David Architects  
156 W. Alamar Ave., Ste. C  
Santa Barbara, CA 93015
- Dan Geiger, Executive Director  
Andrea Traber, President of the Board  
U.S. Green Building Council  
Northern California Chapter  
130 Sutter Street, #600  
San Francisco, CA 94104

**COMMENT: EM- 13.1 and EM-14.1, Section 101.3:** The commenter requested that additional language be added to reference Section 101.3.1.

**RESPONSE:** HCD acknowledges the comment regarding additional text added to Section 101.3.1. However, HCD does not agree that this change is necessary or adds any clarity for the code user. In addition, the comment expresses an opinion that HCD's proposal should apply to all buildings in California. HCD's authority is statutorily limited to residential occupancies. The comment suggests that a section reference be added to reference the next section in the document. No code changes have been proposed to HCD's rulemaking package as a result of this comment.

---

- 5. COMMENTER:** William Schock  
California Building Officials (CALBO)  
835 East 14<sup>th</sup> Street  
San Leandro, CA 94577

**COMMENT: EM-7, EM-7A, Section 101.7:** The commenter suggested deleting the last sentence of Section 101.7 because the code is voluntary and this sentence would prohibit local jurisdictions from adopting the code.

**RESPONSE:** The intent of the proposed text is to maintain consistency with other parts of the California Building Standards Codes. Section 101.8 of the California Building Code contains identical language to what HCD has proposed for this section. In addition, HCD is proposing this code with a mandatory effective date to be concurrent with the effective date of the 2010 California Building Code. No code changes have been proposed to HCD's rulemaking package as a result of this comment.

---

- 6. COMMENTER:** Paul Poirer, AIA, LEED AP, ET AL  
Poirer + David Architects  
156 W. Alamar Ave., Ste. C  
Santa Barbara, CA 93015
- Dan Geiger, Executive Director  
Andrea Traber, President of the Board  
U.S. Green Building Council  
Northern California Chapter  
130 Sutter Street, #600  
San Francisco, CA 94104

**COMMENT: EM- 13.2 and EM-14.2, Section 101.7:** The commenter suggested deleting the last sentence of Section 101.7. The rationale used by the commenter indicates that because the code is voluntary it would prohibit local jurisdictions from adopting more stringent standards prior to the effective date of the code.

---

**RESPONSE:** The intent of the proposed text is to maintain consistency with other parts of the California Building Standards Codes. Section 101.8 of the California Building Code contains identical language to what HCD has proposed for this section. In addition, HCD is proposing this code with a mandatory effective date to be concurrent with the effective date of the 2010 California Building Code. No code changes have been proposed to HCD's rulemaking package as a result of this comment.

---

**7. COMMENTER:** Paul Poirer, AIA, LEED AP, ET AL  
Poirer + David Architects  
156 W. Alamar Ave., Ste. C  
Santa Barbara, CA 93015

Dan Geiger, Executive Director  
Andrea Traber, President of the Board  
U.S. Green Building Council  
Northern California Chapter  
130 Sutter Street, #600  
San Francisco, CA 94104

**COMMENT: EM- 13.3 and EM-14.3, Section 101.7.1:** The commenter expressed concern that the meaning of "climatic" is unclear as used in this section and requested that HCD clarify if the intent was that climatic apply to local conditions or global conditions.

**RESPONSE:** The intent of the proposed text is to maintain consistency with other parts of the California Building Standards Codes. Section 101.8 of the California Building Code contains identical language to what HCD has proposed for this section. The second paragraph of this code section refers the user to the applicable section of the Health and Safety Code (HSC) should the user be looking for additional clarity. HSC Section 17958.8 is titled "Changes or modifications by city or county due to local conditions". HCD believes that should a city, county, or city and county contemplate amendments, additions or deletions to regulations promulgated by HCD, the provided reference to the HSC is adequate to ensure that local enforcing agencies realize this authority is limited to local conditions. However, HCD will take the concerns expressed in this comment under consideration in the development of future rulemaking packages. No code changes have been proposed to HCD's rulemaking package as a result of this comment.

---

**8. COMMENTER:** William Schock  
California Building Officials (CALBO)  
835 East 14<sup>th</sup> Street  
San Leandro, CA 94577

**COMMENT: EM-8, EM-8A, Section 102.3:** The commenter requested additional language be added to this section to clarify that the enforcing agency has the authority to request third party verification and documentation.

**RESPONSE:** HCD is proposing to make a revision to the proposed text due to this comment. However, HCD is not proposing the revision suggested by the commenter. HCD has proposed withdrawing the entire sentence because it does not apply to the current requirements proposed by HCD. Currently, local enforcing agencies are required to enforce regulations adopted by HCD and are entitled to recover costs associated with inspection and verification activities. The intent of this section was to draw attention to certain provisions that may require special expertise. Currently, HCD has not included any mandated third party inspection. In future rulemakings, HCD will address this issue with stakeholder review and review by the California Building Standards Commission Code Advisory Committee.

---

**9. COMMENTER:** Paul Poirer, AIA, LEED AP, ET AL  
Poirer + David Architects  
156 W. Alamar Ave., Ste. C  
Santa Barbara, CA 93015

Dan Geiger, Executive Director  
Andrea Traber, President of the Board  
U.S. Green Building Council  
Northern California Chapter  
130 Sutter Street, #600  
San Francisco, CA 94104

**COMMENT: EM-13.4 and EM-14.4, Section 202:** The comment states that the definition of "Conditioned Space" is vague and ambiguous and that a definition is already provided in the 2007 Energy Code.

**RESPONSE:** The intent of the proposed text is to maintain consistency with other parts of the California Building Standards Codes. Part 6 of the California Building Codes contains nearly identical language and is consistent with what HCD has proposed for the definition of conditioned space. No code changes have been proposed to HCD's rulemaking package as a result of this comment.

---

**10. COMMENTER:** Paul Poirer, AIA, LEED AP, ET AL  
Poirer + David Architects  
156 W. Alamar Ave., Ste. C  
Santa Barbara, CA 93015

Dan Geiger, Executive Director  
Andrea Traber, President of the Board  
U.S. Green Building Council  
Northern California Chapter  
130 Sutter Street, #600  
San Francisco, CA 94104

**COMMENT: EM-13.5 and EM-14.5, Sections 401-406:** The comment states that the limited information contained in this chapter, primarily related to Storm Water, is not sufficient to achieve the overall stated goals outlined in Section 401.1 Purpose. The recommendation is to make this chapter more inclusive with additional information relative to Building Orientation, Brownfield Development, Site Densities, Light Pollution, Public Transportation Access, and Minimizing Paved Parking Areas.

**RESPONSE:** Although HCD believes that the comment may have merit and be applicable in some instances, the proposal would be extremely difficult if not impossible to mandate on a statewide basis. The comments are directed toward measures that have not been proposed by HCD and are therefore outside the scope of this rulemaking. However, HCD will take the concerns expressed in this comment under consideration in the development of future rulemaking packages.

---

**11. COMMENTER:** Bart E. Croes, P.E.  
Chief, Research Division  
1001 I Street  
Sacramento, CA 95812

**COMMENT: EM-15, Section 503.2:** The comment suggests this section should include a mandate to meet the Tier 1, 15% above Title 24 optional requirement proposed by the California Building Standards Commission in Section 503.1 and opines that 15% above Title 24 is achievable and necessary to reduce greenhouse gas.

**RESPONSE:** HCD also received this comment during the initial stakeholder workgroup meetings and at the Code Advisory Committee hearings. HCD has maintained that an increase in percentage above the levels

---

required by the California Energy Commission (CEC) may not be appropriate because the CEC is currently in the final stages of a rulemaking which will tighten the California Energy Code by approximately 20%.

Although HCD believes that the comments may have merit, any mandate to exceed a standard that is not in effect and one of which the total effect is not known is premature. However, HCD will take the concerns expressed in this comment under consideration in the development of future rulemaking packages.

---

**12. COMMENTER:** Randall Higa  
Southern California Edison  
6042 North Irwindale Ave, Suite B  
Irwindale, CA 91702

**COMMENT: EM-16, Section 503.2:** The comment suggests this section should mirror the nonresidential Section 503.1 Energy Performance by including a Tier 1 and Tier 2 that exceed Title 24, and states that the code would be more of a “model ordinance” that can be adopted by local governments.

**RESPONSE:** HCD also received this comment during the initial stakeholder workgroup meetings and at the Code Advisory Committee hearings. HCD has maintained that an increase in percentage above the levels required by the California Energy Commission (CEC) may not be appropriate because the CEC is currently in the final stages of a rulemaking which will tighten the California Energy Code by approximately 20%.

Although HCD believes that the comments may have merit, any mandate to exceed a standard that is not in effect and one of which the total effect is not known is premature. However, HCD will take the concerns expressed in this comment under consideration in the development of future rulemaking packages. In addition, the contents of the proposal by HCD are not intended to be a model ordinance and instead are proposed as a code requirement and mandatory throughout the State of California.

---

**13. COMMENTER:** Paul Poirer, AIA, LEED AP, ET AL  
Poirer + David Architects  
156 W. Alamar Ave., Ste. C  
Santa Barbara, CA 93015

Dan Geiger, Executive Director  
Andrea Traber, President of the Board  
U.S. Green Building Council  
Northern California Chapter  
130 Sutter Street, #600  
San Francisco, CA 94104

**COMMENT: EM-13.6 and EM-14.6, Sections 503 and 504:** The comment suggests that verbiage be added clarifying that the designer has the option to design a building based on either the performance or the prescriptive approach. The comment also suggests that when using the performance approach, a 15% improvement above the requirements contained in the California Energy Code be mandated and that the performance approach include upgraded window performance including thermal breaks in metal window mullions and upgraded insulation.

**RESPONSE:** HCD agrees with a portion of this comment and has proposed a modification to this section to clarify that compliance with the California Energy Code may be accomplished by using either a performance approach or a prescriptive approach. Currently, the California Energy Code does allow both approaches to be used in order to demonstrate compliance.

HCD also received comment during the initial stakeholder workgroup meetings and at the Code Advisory Committee hearings to mandate a certain percentage above the levels required by the California Energy Commission (CEC) and determined it may not be appropriate because the CEC is currently in the final stages of a rulemaking which will tighten the California Energy Code by approximately 20%.

Although HCD believes that the comments may have merit, any mandate to exceed a standard that is not in effect and one of which the total effect is not known is premature. However, HCD will take the concerns expressed in this comment under consideration in the development of future rulemaking packages. In addition, the contents of the proposal by HCD are not intended to be a model ordinance and instead are proposed as a code requirement and mandatory throughout the State of California.

---

**14. COMMENTER:** Bart E. Croes, P.E.  
Chief, Research Division  
1001 I Street  
Sacramento, CA 95812

**COMMENT: EM-15, Section 511.1:** The comment suggests HCD include a new section in the proposed adoption to mandate the installation of wiring for future photovoltaic (PV) installation.

**RESPONSE:** HCD believes that the comment may have merit. However, it was received too late to allow adequate time and review during this rulemaking. Adequate time is not available during this rulemaking to properly obtain public input and establish the benefit, necessity and specificity of this proposal and allow for adequate public participation including designers, builders, stakeholders and the Code Advisory Committee. HCD will take the concerns expressed in this comment under consideration in the development of future rulemaking packages.

---

**15. COMMENTER:** John "Jay" Marlette  
717 Evelyn Avenue  
Albany, CA 94706

**COMMENT: EM-1, Sections 603.2:** The comment suggests that the number of showerheads in a shower be limited to one per allowable floor area required by the California Building Code.

**RESPONSE:** HCD agrees with this comment and has proposed a modification to this section to clarify that if more than one showerhead is installed in a single shower. The multiple head showers would not be allowed to exceed the required 20% indoor water use reduction HCD is proposing. To further clarify the original intent of reducing the indoor water use by specified fixtures within the dwelling unit, HCD is proposing the addition of a section which specifies that the flow of multiple showerheads must be combined and the sum of those combined flow rates cannot exceed the maximum showerhead flow rate specified in Table 603.2.

---

**16. COMMENTER:** Bart E. Croes, P.E.  
Chief, Research Division  
1001 I Street  
Sacramento, CA 95812

**COMMENT: EM-15, Sections 603.1, 603.2 and 603.3:** The comment suggests HCD should propose for adoption mandates for water conservation and water conserving appliances.

**RESPONSE:** Although HCD believes that the comment may have merit in some instances, it also extends to items not typically provided in the majority of new dwellings constructed in California. The comments are also directed toward measures that have not been proposed by HCD and are therefore outside the scope of this rulemaking. HCD also believes adequate time is not available during this rulemaking to properly obtain public input and establish the benefit, necessity and specificity of this proposal and allow for adequate public participation including designers, builders, stakeholders and the Code Advisory Committee. HCD will take the concerns expressed in this comment under consideration in the development of future rulemaking packages.

---

**17. COMMENTER:** Shawn Martin  
Plumbing Manufacturers Institute  
1921 Rohlwing Road  
Rolling Meadows, IL 60008

**COMMENT: EM-11, Table 603.2:** The comment suggests that the water reduction options proposed by HCD be limited to the 20% performance option and the prescriptive option be eliminated. The comment also suggests that the flow rates used in Table 603.2 reference flow rates for showerheads, lavatory faucets, metered faucets, and urinals already developed, or currently under development by the United States Environmental Protection Agency (EPA), WaterSense program, and that kitchen faucets be excluded from the list of fixtures required to reduce water consumption. In addition, the commenter expresses concern that should the flow rates be reduced below the current maximum flow rate of 2.5 gpm, shower valves with required temperature compensating features may not function properly.

In addition, the comment states that a minimum flow rate be established for residential lavatory faucets.

**RESPONSE:** These comments were also discussed during the Code Advisory Committee (CAC) hearings. During initial development and at the CAC hearings, HCD also received supporting comments which encouraged both a prescriptive and performance approach to achieving a 20% reduction in interior water use. Generally, most comments preferred the flexibility and choice. HCD is also aware of the work the U.S. Environmental Protection Agency (USEPA) is doing in its WaterSense program and has based its proposed maximum gpm for showerheads at the upper range that USEPA is currently considering.

Based on the most current information available, USEPA anticipates establishing a maximum flow rate somewhere between 1.5 gpm and 2.0 gpm (measured at 80 pounds psi). USEPA settled on this potential range after examining water savings available for products with flow rates within this proposed range and user satisfaction data collected from water utilities that have distributed these types of water-efficient showerheads to their customers. USEPA did identify one area of potential concern with showerheads more efficient than the current federal 2.5 gpm standard. Currently, shower valves are required to compensate for a pressure drop between the cold and hot and automatically adjust the water temperature supplied to the showerhead to minimize the potential for thermal shock or scalding.

HCD is not averse to including a reference to the WaterSense standards for both lavatory faucets and showerheads when they are both completed and become available for evaluation. The standards HCD is proposing have a mandatory effective date concurrent with adoption of the 2010 California Building Code. However, because of comments previously received from this commenter, HCD has delayed the mandatory effective date of the water savings portion until July 1, 2011. This date will allow HCD to evaluate the results obtained by USEPA and if necessary propose amendments in the next rulemaking cycle. At this time, HCD has not proposed a revision based on this comment and will continue to monitor USEPA and the progress of the WaterSense program.

Although HCD does not fully agree with the commenter regarding kitchen faucets, HCD has chosen to withdraw kitchen faucets from the list of plumbing fixtures included in the 20% reduction calculation specified in Section 603.2. However, HCD intends to consider the inclusion of kitchen faucets in the next rulemaking cycle. Metered faucets are not typically installed in occupancies covered by HCD's proposed regulations and are not included in the 20% reduction calculation; therefore, HCD is not responding to the comment regarding metered faucets.

---

**18. COMMENTER:** Shawn Martin  
Plumbing Manufacturers Institute  
1921 Rohlwing Road  
Rolling Meadows, IL 60008

**COMMENT: EM-12, Table 603.2:** The comment suggests that the effective date of July 1, 2011 for the use of High-Efficiency 1.28 gallon flush toilets does not allow industry adequate time to develop the quantity or range of models required to meet the expected demand and instead proposes to delay the use of these toilets until January 1, 2014. The comment also expresses concern about the performance of these toilets and seems to indicate that acceptable performance may not be available until January 1, 2014.



**RESPONSE:** During initial development of HCD's proposal and at the CAC hearings, HCD stated it would work with the plumbing manufacturing industry in an effort to establish an acceptable date for implementation of this requirement. The representatives of the manufacturers have continued to maintain that the manufacturers are concerned that they may not be able to meet the sales demand in California prior to January 1, 2014. AB 715, [Laird] Statutes of 2007 required that by January 1, 2014, all models of toilets sold in California must be High Efficiency Toilets (HET) and have an effective flush rate of 1.28 gallons or less. AB 715 also contained phase in dates to meet the 100% mandate.

HCD realizes that every model a manufacturer sells may not be available for sale in California by the July 1, 2001 effective date. However, HCD believes that a sufficient number of toilets will be available due to the following: 1) by January 1, 2012, 75% of all models sold in California must be HET, and 2) Currently USEPA has certified over 180 different models from multiple manufacturers that meet the HET standard.

Because of comments previously received from this commenter, HCD has delayed the mandatory effective date of the water savings portion until July 1, 2011. At this time, HCD has not proposed further revision based on this comment and will continue to monitor product availability and, if necessary, provide revisions in future rulemakings prior to the effective date.

---

**19. COMMENTER:** Paul Poirer, AIA, LEED AP, ET AL  
Poirer + David Architects  
156 W. Alamar Ave., Ste. C  
Santa Barbara, CA 93015

Dan Geiger, Executive Director  
Andrea Traber, President of the Board  
U.S. Green Building Council  
Northern California Chapter  
130 Sutter Street, #600  
San Francisco, CA 94104

**COMMENT: EM-13.7 and EM-14.7, Table 603.2:** The comment suggests that Table 603.2 should be modified to include dual flush toilets and recommends that blowout water closets be excluded from the table.

**RESPONSE:** HCD agrees with this comment and has proposed a modification and a deletion to Table 603.2. Although blowout water closets are not commonly used in low-rise residential buildings, HCD accepted the comment and is proposing to remove blowout water closets from the table. However, HCD does anticipate review of this removal for possible inclusion during the next code adoption cycle.

Dual flush water closets have two different flush volumes and are measured by "effective flush rate". Accepted test criteria for dual flush water closets use three flushes to establish the effective flush rate, typically (2) flushes at the lower volume and (1) at the higher volume which average 1.28 gallons or less. To address the concern expressed in the comment, HCD has proposed a footnote to the table indicating the national standard a dual flush toilet must meet or exceed to be considered a 1.28 gallon flush toilet.

---

**20. COMMENTER:** Paul Poirer, AIA, LEED AP, ET AL  
Poirer + David Architects  
156 W. Alamar Ave., Ste. C  
Santa Barbara, CA 93015

Dan Geiger, Executive Director  
Andrea Traber, President of the Board  
U.S. Green Building Council  
Northern California Chapter  
130 Sutter Street, #600  
San Francisco, CA 94104

**COMMENT: EM-13.8 and EM-14.8, Item 1, Section 701.1:** The comment suggests that HCD add the following text to Section 701.1; “and use of materials that reduce the off-site impacts of harvesting, manufacturing, and transport of materials, such as habitat destruction, off-site air and water pollution, and deforestation.”.

**RESPONSE:** HCD is not proposing any change due to the comment because the changes are beyond the scope of this rulemaking. HCD and other stakeholders will be developing these standards further in the next rulemaking cycle. Adequate time is not available during this rulemaking to properly obtain public input and establish the benefit, necessity and specificity of this proposal and allow for adequate public participation including designers, builders, stakeholders and the Code Advisory Committee. HCD believes that the nature of this proposal may be outside the scope of its authority. However, HCD may take the concerns expressed in this comment under consideration in the development of future rulemaking packages.

---

**21. COMMENTER:** William Schock  
California Building Officials (CALBO)  
835 East 14<sup>th</sup> Street  
San Leandro, CA 94577

**COMMENT: EM-9, Application Checklist Section 705.3:** The comment states that the reference Section 705.3 does not exist in the proposed express terms developed by HCD.

**RESPONSE:** HCD agrees with the comment and has proposed revisions to address the sections that have previously been renumbered or relocated during the development of this code. HCD has also included some grammatical changes to more closely mirror the text used in the body of the code. The changes do not have a change in regulatory effect and are sufficiently related to HCD's original proposal.

---

**22. COMMENTER:** Bart E. Croes, P.E.  
Chief, Research Division  
1001 I Street  
Sacramento, CA 95812

**COMMENT: EM-15, Section 708.3:** The comment suggests HCD should require a 50% waste recycling rate and include a 75% rate as an option.

**RESPONSE:** Although HCD believes that the comment may have merit, the comment is directed toward optional measures that have not been proposed by HCD and are therefore outside the scope of this rulemaking. However, HCD may take the concerns expressed in this comment under consideration as a requirement in the development of future rulemaking packages.

---

**23. COMMENTER:** Paul Poirer, AIA, LEED AP, ET AL  
Poirer + David Architects  
156 W. Alamar Ave., Ste. C  
Santa Barbara, CA 93015

Dan Geiger, Executive Director  
Andrea Traber, President of the Board  
U.S. Green Building Council  
Northern California Chapter  
130 Sutter Street, #600  
San Francisco, CA 94104

**COMMENT: EM-13.8 and EM-14.8, Item 6 Section 708.3:** The comment states that California law already requires local governments to achieve a 50% solid waste diversion rate, and therefore 50% is too low a bar to qualify as a green building practice. The comment also suggests that the percentage of waste diversion should be 75%.

**RESPONSE:** This comment states that the provision for 50% construction waste diversion is mandated, but it refers to 50% of all solid waste. The reduction proposed by HCD is specific to a 50% reduction in construction waste alone. The Code Advisory Committee recommended against a tiered approach to standards, advising instead to require “at least” or “a minimum of” a single value.

---

**24. COMMENTER:** William Schock  
California Building Officials (CALBO)  
835 East 14<sup>th</sup> Street  
San Leandro, CA 94577

**COMMENT: EM-9, Application Checklist Section 709.2:** The comment states that the reference Section 709.2 does not exist in the proposed express terms developed by HCD. The comment also questions whether the correct section reference should be Section 708.2 as proposed for adoption by the California Building Standards Commission.

**RESPONSE:** HCD agrees with the comment and has proposed revisions to address the sections that have previously been renumbered or relocated during the development of this code. HCD has also included some grammatical changes to more closely mirror the text used in the body of the code. The changes do not have a change in regulatory effect and are sufficiently related to HCD’s original proposal.

---

**25. COMMENTER:** William Schock  
California Building Officials (CALBO)  
835 East 14<sup>th</sup> Street  
San Leandro, CA 94577

**COMMENT: EM-9, Application Checklist Section 711.2:** The comment states that the reference Section 711.2 does not exist in the proposed express terms developed by HCD. The comment also questions whether the correct section reference should be Section 710.2.

**RESPONSE:** HCD agrees with the comment and has proposed revisions to address the sections that have previously been renumbered or relocated during the development of this code. HCD has also included some grammatical changes to more closely mirror the text used in the body of the code. The changes do not have a change in regulatory effect and are sufficiently related to HCD’s original proposal.

---

**26. COMMENTER:** Bart E. Croes, P.E.  
Chief, Research Division  
1001 I Street  
Sacramento, CA 95812

**COMMENT: EM-15, Section 802.1:** The comment suggests that HCD should reference the VOC definition contained in Title 17 and propose for adoption definitions for Low Vapor Pressure-VOC and Reactive Organic Compounds.

**RESPONSE:** HCD agrees with a portion of the comment and is proposing to include a definition consistent with the ARB and proposals by other state agencies. HCD does not use the terms Low Vapor Pressure-VOC and Reactive Organic Compound in our proposed text and is not proposing to include a definition of those terms. However, in order to remain consistent with proposals by the California Building Standards Commission, the Division of the State Architect, and the Office of Statewide Health Planning and Development, HCD is proposing adoption of a common definition for VOC with those agencies.

---

**27. COMMENTER:** William Schock  
California Building Officials (CALBO)  
835 East 14<sup>th</sup> Street  
San Leandro, CA 94577

**COMMENT: EM-9, Application Checklist Sections 804.1.1, 804.1.2 and 804.1.3:** The comment states that the reference Sections 804.1.1, 804.1.2 and 804.1.3 are not correct. The comment also questions whether the correct section reference should be Sections 804.4.1, 804.4.2 and 804.4.3.

**RESPONSE:** HCD agrees with the comment and has proposed revisions to address the sections that have previously been renumbered or relocated during the development of this code. HCD has also included some grammatical changes to more closely mirror the text used in the body of the code. The changes do not have a change in regulatory effect and are sufficiently related to HCD's original proposal.

---

**28. COMMENTER:** William Schock  
California Building Officials (CALBO)  
835 East 14<sup>th</sup> Street  
San Leandro, CA 94577

**COMMENT: EM-9, Application Checklist Section 804.1.4.1:** The comment states that the reference Section 804.1.4.1 does not exist in the proposed express terms developed by HCD.

**RESPONSE:** HCD agrees with the comment and has proposed revisions to address the sections that have previously been renumbered or relocated during the development of this code. HCD has also included some grammatical changes to more closely mirror the text used in the body of the code. The changes do not have a change in regulatory effect and are sufficiently related to HCD's original proposal.

---

**29. COMMENTER:** William Schock  
California Building Officials (CALBO)  
835 East 14<sup>th</sup> Street  
San Leandro, CA 94577

**COMMENT: EM-9, Application Checklist Section 804.1.4.2:** The comment states that the reference Section 804.1.4.2 is not correct. The comment also questions whether the correct section reference should be Section 804.3.

**RESPONSE:** HCD agrees with the comment and has proposed revisions to address the sections that have previously been renumbered or relocated during the development of this code. HCD has also included some grammatical changes to more closely mirror the text used in the body of the code. The changes do not have a change in regulatory effect and are sufficiently related to HCD's original proposal.

---

**30. COMMENTER:** Paul Poirer, AIA, LEED AP, ET AL  
Poirer + David Architects  
156 W. Alamar Ave., Ste. C  
Santa Barbara, CA 93015  
  
Dan Geiger, Executive Director  
Andrea Traber, President of the Board  
U.S. Green Building Council  
Northern California Chapter  
130 Sutter Street, #600  
San Francisco, CA 94104

**COMMENT: EM-13.9 and EM-14.9, Table 804.4.2:** The comment states that Table 804.4.2 should only have one column for effective date and the other column should be omitted.

---

**RESPONSE:** HCD is not proposing any changes due to this comment. The additional column allows for future effective dates for VOC limits which will serve as notice and allow for transition by the code user. The multiple columns also provide historical information on the changes to VOC limits in California.

---

**31. COMMENTER:** Bart E. Croes, P.E.  
Chief, Research Division  
1001 I Street  
Sacramento, CA 95812

**COMMENT: EM-15, Section 804.3:** The comment suggests that both HCD and the California Building Standards Commission adopt Section 804.3 and that the covering of the mechanical equipment extend to transportation and storage.

**RESPONSE:** While HCD tends to agree with the comment regarding protection during transportation, it is something not inspected or covered by enforcing agencies. However, HCD is proposing to include a requirement that mechanical equipment also be protected while it is stored on a construction site.

---

**32. COMMENTER:** Bart E. Croes, P.E.  
Chief, Research Division  
1001 I Street  
Sacramento, CA 95812

**COMMENT: EM-15, Section 804.4:** The comment suggests that both HCD and the California Building Standards Commission adopt Section 804.4 as mandatory.

**RESPONSE:** HCD is proposing this code with a mandatory effective date to be concurrent with the effective date of the 2010 California Building Code. No code changes have been proposed to HCD's rulemaking package as a result of this comment.

---

**33. COMMENTER:** Bart E. Croes, P.E.  
Chief, Research Division  
1001 I Street  
Sacramento, CA 95812

**COMMENT: EM-15, Sections 804.4.1 and 804.4.2:** The comment suggests that both HCD and the California Building Standards Commission extensively modify language that is currently proposed to include references to portions of regulations adopted by the California Air Resources Board. The comment also states that Section 804.4.1 lists sealants as a regulated item but Table 804.1.1 does not include any VOC limits for sealants.

**RESPONSE:** HCD agrees with a portion of the comment and believes that more time is needed to further evaluate the remainder of the comment. HCD is accommodating part of the comment and proposing to omit references to sealants, which are not covered in Table 804.4.1. These changes were submitted in a 15-day comment period.

In review of this comment, HCD agreed with the ARB that the referenced Table 804.4.1 does not cover sealants. HCD also believes that to include a new table for sealants or include additional requirements would require an additional 45-day comment period and would not allow for review by the Code Advisory Committee.

In addition, HCD believes that other portions of the comment may have merit. However, the comment was received too late to allow adequate time and review during this rulemaking. Adequate time is not available during this rulemaking to properly obtain public input and establish the benefit, necessity and specificity of this proposal and allow for adequate public participation including designers, builders, stakeholders and the Code Advisory Committee. HCD will take the concerns expressed in this comment under consideration in

---

the development of future rulemaking packages and will work with the commenter to accommodate concerns.

**34. COMMENTER:** Bart E. Croes, P.E.  
Chief, Research Division  
1001 I Street  
Sacramento, CA 95812

**COMMENT: EM-15, Section 804.4.3.2:** The comment suggests that there is a typographical error in Section 804.4.3.2 and that the section reference to Section 804.1.1 is not correct.

**RESPONSE:** Upon review, HCD agrees with the comment, has determined that the comment was correct and has proposed to remove the typographical error and correct the section reference.

---

**35. COMMENTER:** Bart E. Croes, P.E.  
Chief, Research Division  
1001 I Street  
Sacramento, CA 95812

**COMMENT: EM-15, Table 804.4.4:** The comment suggests that origin of the formaldehyde emission limits specified in Table 804.4.4 be referenced.

**RESPONSE:** HCD agrees with this comment stating that the Air Resources Board, Airborne Toxic Control Measure (ATCM) recently approved by the Office of Administrative Law should be included as a reference. HCD has included a footnote to ensure the code user is aware that the maximum limits in Table 804.4.4 are consistent with the maximum values developed by the ARB.

---

**36. COMMENTER:** Bart E. Croes, P.E.  
Chief, Research Division  
1001 I Street  
Sacramento, CA 95812

**COMMENT: EM-15, Section 804.4.4.1:** The comment suggests that HCD include a section in its proposed adoption to encourage early adoption of more stringent Phase 2 formaldehyde emission standards.

**RESPONSE:** During development of the proposed standards, HCD had discussions with the Air Resources Board and determined that implementation of the Phase 2 standards would not be feasible at this time. According to comments HCD received, a sufficient amount of product manufacturers are not capable of meeting this standard and future product. Although not opposed to stretching in some areas to promote the use of greener construction products, HCD does not believe an accelerated implementation date is achievable at this time. HCD will take the concerns expressed in this comment under consideration in the development of future rulemaking packages and will work with the commenter to accommodate concerns.

---

**37. COMMENTER:** Bart E. Croes, P.E.  
Chief, Research Division  
1001 I Street  
Sacramento, CA 95812

**COMMENT: EM-15, Section 804.4.4.2:** The comment recommends deleting the requirements for Agrifiber products contained in Section 804.4.2 and states the following. It could put agrifiber products at a competitive disadvantage. Agrifiber products are included under the ATCM if they meet the definition of hardwood plywood, particleboard or medium density fiberboard, so it would be preferable to have them meet the performance standards of the ATCM. Also, provisions of the ATCM provide incentives for the use of no added formaldehyde (NAF) resins and ultra-low emitting formaldehyde resins. Methyl diisocyanate, an NAF resin, is currently most often used for agrifiber products. There are some recent innovations with UF resin

---

technology which result in formaldehyde levels similar to NAF resins, and these should be allowed in the future.

**RESPONSE:** HCD accepted this comment from the Air Resources Board, and has proposed to remove the reference to agrifiber products.

---

**38. COMMENTER:** Bart E. Croes, P.E.  
Chief, Research Division  
1001 I Street  
Sacramento, CA 95812

**COMMENT: EM-15, Section 804.4.4.3:** The comment recommends deleting the requirements for adhesives contained in Section 804.4.3 and indicates adhesives are covered in the provisions of Table 804.4.4, since resins are part of the complete product and the product as a whole must meet the emission limits.

**RESPONSE:** HCD agrees with the commenter that these products will be covered by the maximum levels set in Table 804.4.4 and has proposed to remove Section 804.4.4.3 from this rulemaking.

---

**39. COMMENTER:** Bart E. Croes, P.E.  
Chief, Research Division  
1001 I Street  
Sacramento, CA 95812

**COMMENT: EM-15, Section 804.4.4.4:** The comment makes editorial recommendations regarding the documentation required to verify formaldehyde levels in composite wood products.

**RESPONSE:** HCD agrees with the comment and has proposed editorial revisions to this section. The amendment provides clarity and is sufficiently related to the original proposal. This change was submitted in a 15-day comment period, and CBSC received no comments on the revisions.

---

**40. COMMENTER:** Jed Waldman  
CA Dept of Public Health Services  
850 Marina Bay Pkwy  
Richmond, CA 94804

**COMMENT: EM-17, Section 805:** The comment states that subsections should be added to require verification of compliance with mold and moisture management requirements during design, construction, acceptance, and occupancy phases as referenced in *Greenguard GGBS MP.001, Mold and Moisture Management Standard for New Construction*, when it is approved.

**RESPONSE:** Although HCD believes that the comment may have merit, the comment is directed toward measures that have not been proposed by HCD and are therefore outside the scope of this rulemaking. However, HCD may take the concerns expressed in this comment under consideration as a requirement in the development of future rulemaking packages after adequate public input to establish the benefit, necessity and specificity of this proposal.

---

**41. COMMENTER:** George Faggella  
California Department of Public Health  
1616 Capitol Ave MS 740S  
Sacramento, CA 95899

**COMMENT: EM-3, Section 805.3:** The comment suggests mandates for Radon Resistant Constructions be included and reference Appendix F of the International Residential Code, ASTM E1465-07a, or other equivalent standard.

---

**RESPONSE:** HCD is not proposing any change due to the comment because the changes are beyond the scope of this rulemaking. HCD received this comment during the development of this proposal and also received negative comments regarding a mandate for Radon Resistant Construction.

---

**42. COMMENTER:** Bart E. Croes, P.E.  
Chief, Research Division  
1001 I Street  
Sacramento, CA 95812

**COMMENT: EM-15, Sections 806.3 and 806.3.1:** The comment suggests that the exception for homes with whole house ventilation systems should be deleted because some of these systems do not draw exhaust air from bathrooms and area specific ventilation would still be needed in bathroom and kitchen areas. The comment also suggests the requirement is redundant with the 2008 California Energy Standards.

**RESPONSE:** During development of these proposed standards, HCD received comment stating that whole house fan systems should be exempted from the proposal to accommodate the California Energy Commissions future energy standards. At this time, HCD is not proposing any changes to this section. However, HCD is planning to consider this section for revision in future rulemakings and will take the concerns expressed in this comment under consideration. HCD will also work with the commenter and other stakeholders to resolve any additional concerns.

---

**43. COMMENTER:** Bart E. Croes, P.E.  
Chief, Research Division  
1001 I Street  
Sacramento, CA 95812

**COMMENT: EM-15, Section 806.4:** The comment suggests that heating and air conditioning filters have a rating of MERV 8 or higher and that: 1) the edge of the air filter must seal tightly against the gasket in the filter rack and no gap should be visible along the filter edge; and 2) the filter must be "readily accessible" for routine maintenance. ASHRAE 62.1 defines "readily accessible" as "capable of being reached quickly for operation without requiring those for whom ready access is required to climb over or remove obstacles or to resort to portable ladders, chairs, or other climbing aids."

**RESPONSE:** Although HCD believes that portions of the comment may have merit and be capable of implementation on a statewide basis, HCD also has received comment that a rating higher than MERV 6 is not achievable in residential construction without extensive modification to the fan portion of the heating and cooling system in order to minimize the pressure drop across a more restrictive filter media. However, HCD will take the concerns expressed in this comment under consideration in the development of future rulemaking packages. At this time, HCD is not proposing any changes to this section. However, HCD is planning to consider this section for revision in future rulemakings and will take the concerns expressed in this comment under consideration. HCD will also work with the commenter and other stakeholders to study these suggestions.

---

#### **DETERMINATION OF ALTERNATIVES CONSIDERED AND EFFECT ON PRIVATE PERSONS**

(Government Code Section 11346.9(a)(4))

The California Green Building Standards Code is proposed to be Part 11 of Title 24 of the California Code of Regulations, known as the California Building Standards Code.

Health and Safety Code Section 17922 directs the Department of Housing and Community Development (HCD) to adopt the most recent edition of the Uniform Building Code (UBC) published by the International Conference of Building Officials (ICBO) into Part 2 of Title 24 of the California Code of Regulations. Following the publication of the 1997 UBC, ICBO notified HCD and the California Building Standards Commission (CBSC) that ICBO will no longer publish the UBC. Pursuant to the court case International



Association of Plumbing and Mechanical Officials v. California Building Standards Commission (1997) 55 Cal.App.4<sup>th</sup> 245 (Ct of Appeal 3<sup>rd</sup> Dist CA) the CBSC is not limited to the statutorily identified model codes in HSC section 17922.

In addition to stakeholder input, the Department of Housing and Community Development has reviewed several green building programs, guidelines, standards and reports including but not limited to the following:

California Green Builder  
LEED for Homes Pilot  
NAHB Model Green Homebuilding Guidelines  
US Environmental Protection Agency - Indoor Air Package  
Build It Green  
American Concrete Institute - Standard ACI 302.1R-04 and ACI 302.2R-06  
South Coast Air Quality Management District – Rule 1113 and Rule 1168  
California State Water Resources Control Board- Construction Storm Water Program  
A California Builders Guide to Reduced Mold Growth – A Report to the California Energy Commission

Recent proposed green building legislation (AB 35 concerning state-owned buildings, AB 888 concerning commercial B-occupancy buildings and AB 1035 concerning residential construction) was vetoed by the Governor. However, in his veto messages, the Governor expressed his support for development of green building standards, but advised that they should not be statutory, not conflict with current safety standards, and not rely on private entities to set standards. HCD has collaborated with the CBSC and other state agencies to develop green building standards.

#### **CBSC Direction – Develop Green Building Standards**

At its July 19, 2007 meeting, the California Building Standards Commission (CBSC) formally directed CBSC staff to develop green building standards for new construction of buildings under its authority and submit these standards for adoption during the 2007 Annual Code Adoption Cycle. In addition, the CBSC requested and encouraged the Department of Housing and Community Development (HCD), the Division of State Architect (DSA), and the Office of Statewide Health Planning and Development (OSHPD) to develop green building standards for new construction of buildings under their respective authority and also submit these standards for adoption during the 2007 Annual Code Adoption Cycle.

HCD does not believe that the proposed California Green Building Standards Code will have a significant adverse impact on California business and individuals, including the ability of California businesses to compete with business in other states; affect the creation of or elimination of jobs within California; affect the creation of or elimination of existing business within the state of California; or affect the expansion of businesses currently doing business within the State of California.

Due to the series of reviews by representatives of business and the community that these proposed model codes are subjected to, prior to and after HCD's review, and since there were no acceptable alternatives proposed to HCD as a result of the Public Comment Period, HCD has no reason to believe that there is an alternative to these regulations that would be more effective in carrying out the purpose for which the regulations are proposed or would be as effective and less burdensome to affected private persons than the adopted regulations.

#### **REJECTED PROPOSED ALTERNATIVE THAT WOULD LESSEN THE ADVERSE ECONOMIC IMPACT ON SMALL BUSINESSES**

(Government Code Section 11346.9(a)(5))

No acceptable proposed alternatives were received by the Department of Housing and Community Development that would lessen the adverse economic impact on small businesses.